

The Sisyrinchium of the Antilles

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The genus *Sisyrinchium* (Iridaceae) is well represented in continental North America, where regionally it produces difficult complexes of subtly intergrading species. To the southeast, on the extended archipelago that forms the West Indies, it is very nearly lacking. Only on certain of the islands of the Greater Antilles does the genus have representatives, and there as elsewhere the tenuous characteristics of its species have been a source of taxonomic and nomenclatural confusion. The time is not yet here when these problems can be wholly resolved, but the following remarks may assist in narrowing the areas of uncertainty.

Although these observations are oriented primarily toward a single species of *Sisyrinchium* found in Hispaniola and Cuba and closely related to plants of southern Florida and the southeastern United States, some prefatory comments may be appropriate as to three other species of these and nearby islands.

North of the Antilles, on the Atlantic islands of Bermuda and the Bahamas, three species of *Sisyrinchium* occur. On Bermuda an endemic species is locally very common; it is robust and ornamental and is easily distinguished from all others in North America. This Bermuda plant was known to Linnaeus and correctly bears the name *S. bermudiana* L. (Ward, 1968). It is worth noting that this name has historically been given divers applications. Grisebach (1866) applied it to a plant of Cuba, while more recently Shinnery (1957) assigned it to a species of northeastern North America (*S. angustifolium* Mill.) and Mosquin (1970) gave it an all-encompassing scope by including within it plants from Florida, Newfoundland, California, Alaska, and the Yukon Territory.

A second, less well known *Sisyrinchium* occurs southward, on Grand Bahama and Great Abaco, the northernmost islands of the Bahamas. It is wiry-stemmed, with narrow leaves that discolor in drying and persist in the field as a dense tuft of basal fibres. Britton & Millspaugh (1920) treated this plant (on the basis of the single collection known to them) as *S. miamiense* Bicknell, although Bicknell himself remarked, "it does not fit very well." It does, however, seem indistinguishable from the northeastern coastal *S. arenicola* Bicknell and has recently been assigned to that species (Ward & Gillis, 1975).

A third species of *Sisyrinchium*, quite distantly related to the two species so-far discussed and to the one of principal interest in the present paper, has been obtained on Hispaniola and on the adjacent Bahaman island of Inagua. This species is a yellow-flowered representative of a predominately South American group that has been discussed by Shinnars (1962) but was better understood, at least as to intrageneric placement, by O'Connell (1955). Its members are largely annual, while those of the North American section typified by *S. bermudiana* are short-lived perennials. The South American group is more explicitly set apart by an urceolate perianth (an adjective of qualified application, considering that the perianth tube is obsolete), short partially-free filaments, and abruptly tapering "crab-claw" spathe valves, in contrast to the rotate perianth, wholly-fused filaments, and long-tapering spathe valves of the typical North American *Sisyrinchium*. Urban (1920) cited several collections of this South American annual group from grasslands above 1100 m. on Hispaniola, under the name *S. micranthum* Cav. His reports were duplicated in part by Barker & Dardeau (1930) and by Moscoso (1943). Recent collections from the Dominican Republic have been made by A. H. Liogier (NY). What was probably the same plant was noted as a waif on Inagua, by Howard & Dunbar (1964). Although Shinnars posited that this species should properly be called *S. exile* Bicknell, the name *S. micranthum* is older and is part of the same complex. As Howard & Dunbar have urged, further study of this "species" is needed.

Finally, the *Sisyrinchium* of primary interest in the present paper, a southern extension of the large group of species representing the genus in eastern North America, is found in the Antilles only on the large islands of Hispaniola and Cuba. It seems probable that this antillean plant is not specifically separable from plants that occur in southern Florida, and that it is best treated under the name *S. miamiense* Bicknell.

As noted, at a time when typification and morphological limits of *Sisyrinchium bermudiana* L. were less well understood, writers such as Crisebach (1866) applied this name to collections from Hispaniola and Cuba. A few other names, no more than four or five, were in occasional use in the eastern United States. In the last years of the nineteenth century, however, Eugene P. Bicknell, a New York lawyer as well as a skilled amateur botanist, adopted the genus *Sisyrinchium* for his special attention. Between 1896 and 1904 he published descriptions of and gave names to 70 presumed species of this genus from within the United States and Canada. Although, other than in the Northeast, he worked entirely from herbarium materials and many of his names are patently synonymous, his keen eye and diagnostic pen have provided the base from which work in this genus must proceed.

In addition to *Sisyrinchium bermudiana* L., four of Bicknell's names are of relevance with application to Cupan and Hispaniolan plants. His *S. graminoides* (1896) was a substitute name provided in the belief, now thought to be mistaken (Ward, 1968), that the plant of northeastern North America now generally known as *S. angustifolium* Mill. was without a legitimate name. Urban (1920), acknowledging that the *S. bermudiana* of Linnaeus was not the plant of the Antilles, extended *S. graminoides* southward, appreciably beyond the range envisioned by Bicknell, to Hispaniola and Cuba. Barker & Dardeau (1930) in Haiti and Moscoso (1943) in Santo Domingo have continued this usage, as has Liogier (1969) in Cuba.

Bicknell's *Sisyrinchium flagellum* and *S. miamiense*, published simultaneously (1899), were typified in the first case by Florida specimens from "Pine Key" (now Big Pine Key), Monroe County, and from "open glades" of Manatee County, and in the second case by a collection from Miami, Dade County. His *S. recurvatum* (1903) was based on a Florida collection from Longboat Key, Manatee and Sarasota counties.

Bicknell (1903) had made passing mention of *Sisyrinchium flagellum* in Cuba, but Leon (1946) in using both this name and *S. recurvatum* was the first to visualize more than one species of this group in the Antilles. His unkeyed descriptions were translated and condensed from those provided by Bicknell for Florida plants. Bicknell's own uncertainty as to which one -- or more than one -- of his names should be applied to the Antillean plants is reflected in annotations he provided in 1900 to duplicate collections of Charles Wright's from Cuba: He named *Wright 3257* (MO) as *S. flagellum*, while he marked the essentially identical *Wright 3257* (NY) as *S. miamiense*.

Bicknell's criteria for the separation of these species were not well enunciated at any time. Only in his treatment of the genus for J. K. Small's *Flora of the Southeastern United States* (1903) were the species keyed, and only in this publication was his *S. recurvatum* described. This species was distinguished from *S. flagellum* and *S. miamiense* by wider leaves and recurved pedicels. The leaves and scapes (stems) of *S. flagellum* were seen as smooth-edged with the scapes flexuous and the ultimate branches elongate, while the leaves and scapes of *S. miamiense* were serrulate and erect, with the branches somewhat shorter. Whether these differences, together with other characteristics noted by Bicknell in his earlier papers, can be applied to discrete populations in South Florida is not yet determined, but the present impression, based both on examination of herbarium materials, including the types of each of these three species, and from field observation, is that these plants represent only one somewhat variable grouping.

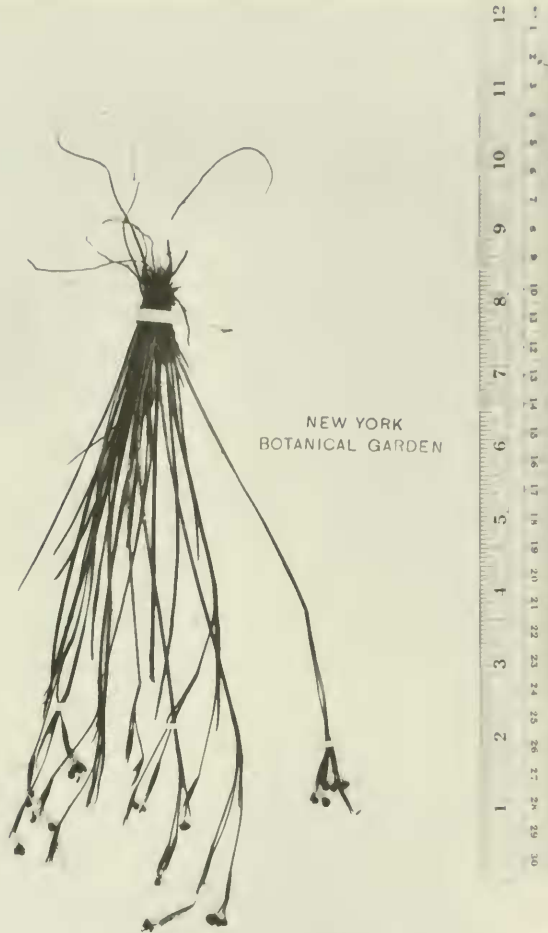


Fig. 1. Sisyrinchium miamiense Bicknell: HOLOTYPE, C. L. Pollard & G. N. Collins 264, New York Botanical Garden. Miami, Florida.

But whether or not the plants of Florida to which these names apply can be separated into two or more taxa, the specimens seen from the Antilles cannot. They are all slender, dark-drying, with scant or no fibrous bases; the ultimate branches are long and slender with the nodes sometimes geniculate; the capsules are few, thin-walled, and brown. The accompanying photograph (Fig. 1), the type of *Sisyrinchium miamiense* Bicknell (C. L. Pollard & G. N. Collins 264, NY), is an unusually small plant but is otherwise representative of this species in the Antilles as well as in southern Florida.

Note must be taken that *Sisyrinchium miamiense* and *S. flagellum* were published simultaneously and that unless one of these names has been considered to be the synonym of the other, either could be assigned to the Antillean plant. For the purpose of nomenclatural stability one of these names should be selected, and the other treated as a synonym. Article 57 of the I.C.B.N. provides that the author who first unites taxa bearing names of the same date must be followed in his choice. Since *S. miamiense* is excellently typified, while *S. flagellum*, with its inclusion of specimens from two separate areas of Florida, is somewhat less so, the first of these names is here chosen for the combined group, and the second is considered its synonym. *S. recurvatum* is, of course, of later date and unavailable for application to any combined grouping.

Antillean specimens of *Sisyrinchium miamiense* (as interpreted here) are not held in large numbers by North American herbaria. Of the 28 collections seen, the following are representative.

- H. v. Turckheim 2884, Feb 1910. Prope Constanza, 1190 m., Santo Domingo. In pinetis. MO, NY.
- J. de Js. Jimenez A. 2534, 26 Jan 1953. El Montazo, 1700 m. alt., Constanza, La Vega Province, Dominican Republic. Herbaceous; flowers blue; common in paludosis. FLAS.
- A. H. Liogier 12191, 17 Aug 1968. Valle Nuevo, 2000-2100 m., Dominican Republic. Herbaceous, 15-20 cm. high; flowers blue; in pine barrens, among grass. NY.
- C. Wright 3257, 1860-1864. Plantae Cubenses Wrightianae: Cuba. MO, NY.
- N. L. Britton, E. G. Britton, P. Wilson 15185, 27 Feb - 1 Mar 1916. Santa Fe, Isle of Pines, Cuba. Grassy arroyo. MO, NY.
- E. L. Ekman 16313, 18 Feb 1923. Dolores, Santa Clara, Cuba. In swamps. NY.

E. P. Killip 44842, 20 Feb 1955. Along road to Santa Isabel near southeast base of Cerro Daguilla, Isle of Pines, Cuba. Marshy land along stream; perianth blue. FLAS, NY.

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